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CATALOGUE

OF THE

West Virginia State Exhibit,

AT THE

INTERNATIONAL EXHIBITION

AT

Philadelphia, in 1876.

By M. F. MAURY,
DIRECTOR IN CHARGE.

PHILADELPHIA:
PRINTED FOR THE WEST VIRGINIA COMMISSION.
1876.

West Virginia. State board of centennial directors
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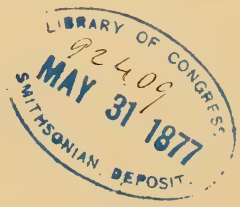

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CAMPBELL PRESS PRINT, CENTENNIAL GROUNDS.

T825
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CATALOGUE

Of the Exhibit of the State of West Virginia at the International Exhibition, at Philadelphia, in 1876.

N. B.—The name of the contributor of each article is in italics.

BARBOUR COUNTY.

No. 1. *Carbonate of Iron.* Seam 2 feet thick, from land of *H. L. Stout,* 2¼ miles south of Phillipi.

" 2. *Carbonate of Iron.* Seam 4 to 6 inches thick, on land of *H. L. Stout,* 4¼ miles south of Phillipi.

" 3. *Carbonate of Iron.* Seam 2 feet thick, on land of *H. L. Stout,* 2¼ miles south of Phillipi.

" 4. *Carbonate of Iron.* From lands of *Lewis Wilson and others,* on Valley River, near Phillipi.

" 5. *White Sand for Glass.* Deposit 3 to 5 feet thick, on land of *J. R. Williamson,* 3 miles from Phillipi.

BERKLEY COUNTY.

No. 6. *Yellow Corn.* Grown on common gravelly loam, by *Wm. Leigh,* Falling Waters. Yield 82 bushels per acre.

" 7. *Barley.*
" 8. *White Corn.* Shelled
" 9. *White Corn.*
" 10. *Yellow Corn.*
" 12. *Yellow Corn.*

} *J. Q. A. Nadenboush,* Martinsburg.

BOONE COUNTY.

" 13. *Cannel Coal.* Section of the seam of the *Peytona Cannel Coal Co.* Maximum yield of gas per 2,240 pounds is 13,200 cubic feet of 32.16 candle power. At a yield of 10,000 cubic feet, the candle power is 41.16. The coal analyses:

Volatile matter	46
Fixed carbon	41
Ash	13
	100

" 14. *Smooth Cannel Coal,* from the Peytona Mines, *T. L. Broun.*

" 15. *Curly Cannel Coal,* from the Peytona Mines, *T. L. Broun.*

" 16. *Cannel Coal.* Seam 5 feet thick, in land of *A. Ball,* at the Court House.

BRAXTON COUNTY.

No. 17. *Pig Iron.* No. 1, cold blast, charcoal.
" 18. *Pig Iron.* " 2, " "
" 19. *Slag,* from No. 2, pig.
" 20. *Slag,* " 1, "
" 21. *Charcoal* used by
" 22. *Limestone* "
" 23. *Roasted ore,* ready for use,
" 24. *Sandstone* used for in-wall and hearth by
} *Elk River Iron and Coal Company, Strange Creek.*

" 25. *Mulberry.*
" 26. *Hickory.*
" 27. *Wild Cherry.*
" 28. *Dogwood.*
" 29. *Sumac.*
" 30. *White Oak.*
" 30½. *Broughton Wheat.*

BROOKE COUNTY.

No. 31. *Bituminous Coal.* Seam 4 feet thick, from Stanton Rock Coal Works, opposite Steubenville.
" 32. *Potters' Clay.* Seam 3 feet thick, owned and worked by *Nathaniel Wells,* opposite Steubenville.
" 33. *Ornamental Bracket,* made of seventy-six kinds of wood native to the country, by *G. B. Crawford,* Wellsburg. For sale.
" 34 *Map of Brooke County.* —— *Myers,* Bethany College.
" 35. *Photographic Views,* showing Bethany Free School Building, Bethany College, Beck's Free School Building, Wellsburg Free School Building, and Wellsburg School House, 1835–45.
" 36 *Pupils' Work,* Wellsburg Public School.
" 36½ *Wool,* 11 fleeces, grown by *C. H. Beall.*
" 36¼ " " *Nathan Beall.*

CABELL COUNTY.

No. 37. *Sandstone,* from a ledge 20 feet thick on the C. & O. R. R., one mile below Barboursville and one hundred yards above the railroad. On the land of *Albert Laidley.*
" 38. *Brine.* Well is 1,135 feet deep. On the Swann Farm, eight miles from Barboursville. Six pounds of brine produce one pound of salt. Besides salt the constituents of the brine are: a minute quantity of chloride of potassium, a pretty large amount of the chlorides of calcium and magnesium. It also contains bromides and iodides of the same bases, the former in insignificant quantity, and the latter scarcely detectable. From all sulphates it is entirely free, and it contains, at most, a mere trace of carbonates. *John B. Laidley.*
" 38. *Corn on Stalk. Jas. E. Downer.*
" 39. *Poplar Boards,* found in large quantities on the Guyandotte river. Unlike poplar generally, it does not shrink nor crack, and is capable of a high polish. *W. L. Peters,* Guyandotte.
" 40. *Mineral Paint.* The light shade is the unburned mineral, while the dark is of the burnt. Makes a very lasting and durable paint; is found in large quantities. *W. L. Peters,* Guyandotte.
" 41. *Photograph* of Marshall College, Huntington.

DODDRIDGE COUNTY.

No. 42. *Tobacco.* Kiln dried, pear leaf, bright wrapper.
" 43. *Tobacco.* Kiln dried, fair stem, bright wrapper.
" 44. *Tobacco.* Air dried, American dark leaf, dark filler.
" 45. *Tobacco.* Kiln dried, pear leaf, dark filler, ground leaf.
" 46. *Tobacco.* Air dried, Connecticut seed leaf, dark wrapper.
" 47. *Tobacco.* Kiln dried, thick set filler.
} *O'Neal, Chewvront & Co.*

FAYETTE COUNTY.

No. 48. *Coal.* Section of seam 7 feet thick, worked by the *Coal Valley Coal Company.* The upper 16 inches is splint, and the rest is gas coal, which in practice yields 10,800 cubic feet of gas of 17 candle power per 2,240 pounds.

	Gas Coal.	*Splint.*
Water	1.322	0.177
Volatile combustible matter	35.203	38.321
Fixed carbon	61.602	57.202
Ash	1.873	4.300
	100.000	100.000
Sulphur in coal	0.658	1.213
" " coke	0.865	1.062

" 49. *Coal and Coke* from *Nuttallburg Mine.* Seam is 3½ to 4 feet thick. Coke is most admirable for blast furnace use.

ANALYSIS OF THE COAL:

Water	0.343
Volatile combustible matter	29.585
Fixed Carbon	69.000
Ash	1.072
	100.000

ANALYSIS OF THE COKE:

Water	0.321
Carbon	91.224
Sulphur	0.925
Ash	7.530
	100,00

" 50. *Semi-Bituminous Coal and Coke* from the *Longdale Coal and Iron Company* Seam is 3½ to 4 feet thick. The coke is a most superior article for blast-furnace use.

ANALYSIS OF THE COAL:

Water	1.03
Volatile matter	21.38
Fixed Carbon	72.32
Ash	5.27
	100.00

ANALYSIS OF THE COKE:

Carbon	93.00
Ash	6.73
Sulphur	0.27
	100.00

" 51. *Bituminous Coal* from the *Gauley Kanawha Coal Company.* Seam is 11 feet thick.

Coke	65.99
Volatile matter	32.61
Water	1.40
	100.00

Volatile gas per ton is 10,100 cubic feet of 17.9 candle power.

No. 52. *Bituminous Coal* from the Cotton Hill seam 5 feet thick. *Dr. W. H Letterman.*

No. 53. *Bituminous Coal* from a 4 feet seam on the Loup Creek 30,000 acre survey. *Beverly Cole*, Cotton Hill.

" 54. *Black Band Iron Ore* reported to be 30 inches thick. On Buckle Branch of Twenty Mile Creek. *Wm. M. Hill*, Gauley Bridge.

" 55. *Sandsttone* from the mouth of Gauley river, where it can be quarried in pieces 6 to 8 feet long. *J. H. Miller Jr.*, Gauley Bridge.

" 56. *White Flint Corn.* Yield, 40 bushels per acre. Grown by *J. G. Settle*, Cotton Hill.

" 57. *White Flint Corn.* Yield, 35bushels per acre. Grown on steep hillside, by *J. E. Dempsey*, Cotton Hill.

" 58. *White Mountain Corn.* Yield, 35 bushels per acre. Grown on land that has been cultivated for 24 consecutive years and never been fertilized in any manner. *Lewis Blake*, Cotton Hill.

" 59. *White Flint Corn.* Yield, 40 bushels per acre. Grown by *H. A. Robson*, Cotton Hill.

" 60. *Yellow Corn.* Yield, 50 bushels per acre. Grown on a steep hillside by *H. M. Dickinson*, Fayetteville.

" 61. *Mountain Corn.* Yield, 50 bushels per acre. *Wm. Settle*, Cotton Hill.

" 62. *White Flint Mountain Corn.* Yield 60 bushels per acre from new ground that had never been plowed before. *W. T. Harvey*, Cotton Hill.

" 63. *Red Lancaster Wheat.* Yield, 30 bushels per acre. *W. T. Harvey*, Cotton Hill.

" 64. *Bowden Winter Wheat.* Yield, 36 bushels per acre. *W. T. Harvey*, Cotton Hill.

" 65. *Bowden Winter Wheat.* Yield, 18 bushels per acre. Grown on steep hillside by *J. E. Dempsey*, Cotton Hill.

" 66. *Bowden Winter Wheat.* Yield, 20 bushels per acre. Grown on steep hillside by *J. G. Settle*, Cotton Hill.

" 67. *Rye.* Yield, 30 bushels per acre. *W. T. Harvey*, Cotton Hill.

" 68. *Buckwheat.* Yield, 50 bushels per acre. *J. G. Settle*, Cotton Hill.

" 69. *Spring Oats.* Yield, 30 bushels per acre. *A. P. Hashbarger*, Cotton Hill.

" 70. *Spring Oats.* Yield, 45 bushels per acre. *Jno. Marrs*, Cotton Hill.

" 71. *Winter Oats.* Yield, 47 bushels per acre. *Jno. Marrs*, Cotton Hill.

" 72. *White Oats.* Yield, 25 bushels per acre. Grown on a steep hillside by *J. E. Dempsey*, Cotton Hill.

" 73. *Timothy.* Yield, 4 tons per acre. Grown on level land by *J. E. Dempsey*, Cotton Hill.

" 74. *Orinoco Tobacco.* Yield, 500 pounds per acre. Grown on a south hillside by *Joe Crager*, Fayetteville.

" 75. *Orinoco Tobacco*, air cured. Yield, 825 pounds per acre. Grown by *W. T. Harvey*, Cotton Hill.

" 76. *Yellow Orinoco Tobacco.* Yield, 825 pounds per acre. Grown by *Jno. Nugen*, Cotton Hill.

" 77. *Orinoco Tobacco*, yellow lugs. Grown by *Jno. Nugen*, Cotton Hill.

" 78. *White Stem Tobacco.* Yield, 800 pounds per acre. Grown on steep mountain side by *William Carter*, Cotton Hill.

" 79. *Orinoco Tobacco.* Yield, 800 pounds per acre. Grown by *John J. Braughan*, Cotton Hill.

" 80. *Orinoco Tobacco.* Yield, 800 pounds per acre. Grown on steep hillside by *J. A. Dempsey*, Cotton Hill.

" 81. *Orinoco Tobacco.* Yield, 850 pounds per acre. Grown by *Wm. Settle*, Cotton Hill.

" 82. *Orinoco Tobacco.* Yield, 1,000 pounds per acre. Grown on hillside by *J. E. Dempsey*, Cotton Hill.

" 83. *Orinoco Tobacco.* Yield, 850 pounds per acre. Grown on steep hillside by *J. G. Settle*, Cotton Hill.

" 84. *Orinoco Tobacco*, air cured. Yield, 925 pounds per acre. Grown by *A. P. Hashbarger*, Cotton Hill.

" 85. *"Prime" Orinoco Tobacco,* } Yield, 1,000 pounds per acre. Charcoal

" 86. *"Seconds" Orinoco Tobacco,* } cured. Grown by R. B. Cassady, Cotton Hill.

No. 87. *White Flax.* Yield 2 tons per acre. Grown by *J. G Settle,* Cotton Hill.
" 88. *Veneers.* 20 specimens. *S. H. Brown,* Cotton Hill.
" 89. *Curled Ash* (board) } *J. B. Sinsel,* Cotton Hill.
" 90. *Straight* " " }

	Common Name.	Botanical Name.	Contributor.
No. 91.	*Dogwood,*	Cornus Florida,	
" 92.	*Chittum,*	Halesia Tetraptera,	*J. H. Miller, Jr.*
" 93.	*Papaw,*	Asimina Triloba.	
" 94.	*Laurel,*	Rhododendron Maximum,	Gauley Bridge.
" 95.	*Ivy,*	Kalmia Latifolia.	
" 96.	*Grape Vine,*	Vitis Vulpina.	
" 97.	*Camphor,* "		
" 98.	*Virginia Creeper.*		
" 99.	*Sweet Gum,*	Liquidambar Styraciflua.	

" 100. *Curled Walnut,* } *Dr. W. H. Letterman,* Cotton Hill.
" 101. *Curled Maple,* }
" 102. *Holly, J. M. Abbot,* Cotton Hill.
" 103. *Laurel Root, J. B. Keesey,* Cotton Hill.
" 104. *Blackberry Stalk.* Bush 18 feet high. *James Norton,* Cotton Hill.
" 105. *Osier Willows. Dr. W. H. Letterman.*
" 106. *White Oak Stave. James Guard,* Cotton Hill.
" 107. *Sample of Curled Maple. R. B. Cassady,* Cotton Hill.
" 108. *Molasses Shook. Daniel Heald,* Cotton Hill.
" 109. *Willow Basket. Mary E. Robson,* manufacturer, Cotton Hill.
" 110. *Carving Knife.* A "home made" article, by *Calvin Marrs,* blacksmith, Cotton Hill.

GILMER COUNTY.

No. 111. *White Corn.* Yield 55 bushels per acre, growm by *J. W. Fisher,* Tanners.
" 112. *Pupils' Work.* State Normal School, Glenville.

GRANT COUNTY.

No. 113. *Brown Hœmatite.* Vein 7 feet thick. *F. Lewis & Co.,* Greenland Gap.

Peroxide of Iron	75.033
Binoxide of Manganese	0.025
Silica	14.354
Alumina	7.445
Phosphoric Acid	2.020
Sulphuric Acid	0.240
Lime	0.521
Magnesia	0.230
Loss, &c	0.132
	100.000

Iron	52.52	per cent.
Phosphorus	0.88	"
Sulphur	0.096	"

" 114. *Fossilliferous Iron Ore.* Vein 13 feet thick. *F. Lewis & Co.,* Greenland Gap.

Peroxide of Iron	68.750
Silica	15.555
Phosphoric Acid	1.842
Sulphuric Acid	0.120
Alumina, Water and Loss	13.733
	100.000

Iron	48.130	per cent.
Phosphorus	0.803	"
Sulphur	0.048	"

No. 115. *Red Hæmatite,* mixed with some red fossil ore. Vein 18 feet thick. *F. Lewis & Co.,* Greenland Gap.

" 116. *Red Hæmatite.* Vein 8 feet thick. *F. Lewis & Co.,* Greenland Gap.

" 117. *Brown Hæmatite. F. Lewis & Co.,* Greenland Gap.

Note: The last five samples are from one mountain, and all different deposits.

" 118. *Calc Spar. F. Lewis & Co.,* Greenland Gap.

" 119. *Calcareous Marl* from Patterson's Creek. Has a surface of 6 or 8 acres and a depth of 25 to 30 feet; used for manuring. *J. V. Williams,* Williamsport.

GREENBRIER COUNTY.

No. 120. *Brown Hæmatite.* Seam is composed of 6 to 8 feet of clay and slate, colored with ferruginous matter, and filled with nodules of iron. Owing to the position of this ore on the hillside, it can easily be delivered in the cars by chutes, and no hauling will be necessary. On the land of *Cecil Clay* and *R. L. Kestor,* half a mile from Ronceverte Depot on the C. & O. R. R.

" 121. *Brown Hæmatite.*
" 122. " "
" 123. " "
" 124. " "
" 125. " "

} From Howard's Creek, on the land of *G. G. Peterkin.*

" 126. *Iron Ore* from the land of *G. W. Nickels,* Big Clear Creek.

" 127. *Gray Sandstone* for building. Heavy ledges of it on the land of *Cecil Clay* and *R. L. Kestor,* Ronceverte Depot, C. & O. R. R. On account of its admirable qualities, several thousand cubic yards were quarried and boated down the Greenbrier River to build the piers, &c., of the railroad bridge over that stream, though there are quarries much nearer the bridge. Stones 10 feet long were taken out.

" 128. *Chocolate Sandstone,* on the same land as the last. Has a local demand for building.

" 129. *Mill-stone Rock,* from land of *G. G. Peterkin,* Howard's Creek.

" 130. *Spotted Marble,* reported to be in an 18 inch bed, on the land of *Jas. Withrow,* Lewisburg.

" 131. *Black Marble,* from the same locality as the last. This deposit has only lately been noticed and nothing is known of the size.

" 132. *Blue Limestone,* from the line of the C. & O. R. R., *R. K. Cantley,* Lewisburg.

Carbonate Lime	93.76
Carbonate Magnesia	0.29
Carbonate Iron	0.38
Silica	3.92
Alumina	0.74
Water	0.76
Loss, etc	0.15
	100.00

Note: The next six specimens are from a quarry 50 feet deep, at Fort Spring on the C. & O. R. R., and the land of *Mathew Mann.*

" 133. *Limestone,* a very superior article from 1 to 10 feet thick. It is a good building stone and is the flux used at the Quinnimont Furnace, Fayette County.

Carbonate Lime	90.11
Carbonate Magnesia	2.49
Insoluble Silicious Matter	5.04
Oxide of Iron and Alumina	2.02
Water and Loss	0.34
	100.00

No. 134. *Limestone,* suitable for making lime for finishing purposes, makes a plaster of very fine quality, is very plentiful, easily worked, polishes well to a gray face.

" 135. *Limestone,* make a very superior lime.

" 136. *Limestone,* very abundant and one grade finer than the last.

" 137. *Limestone,* obtainable in any quantity, makes a fine quality of lime, is suitable for building purposes and is of very fine grain.

" 138. *Limestone,* coarse grain, in enormous quantities, is easily worked and makes a superior lime.

" 139. *Calc Spar. W. A. Alexander.*

" 140. *Bituminous Coal* from the land of *G. W. Nickell,* Big Clear Creek. It is the most easterly coal of the conglomerate series. Reported to be 4½ feet thick.

" 141. *Black Oxide of Manganese* from the land of *G. G. Peterkin,* Anthony's Creek.

" 142. *White Flint,* said to be useful in whitening white ware. Occurs along the ridge just east of Lewisburg in large quantities on the surface of the ground. *R. K. Cautley,* Lewisburg.

" 143. *Silicious Coral* from same locality as the last. *R. K. Cautley,* Lewisburg.

" 144. *Mineral Water* from Magnesia Spring, Colwell House, near White Sulphur Springs depot, C. & O. R. R. *Joel McPherson.* Solid contents of one imperial gallon:

Carbonate Lime	22.367	grains.
Carbonate Magnesia	11.160	"
Carbonate Iron	0.320	"
Sulphate Lime	21.010	"
Sulphate Magnesia	12.060	"
Sulphate Potash	1.460	"
Sulphate Soda	1.201	"
Sulphate Ammonia	0.179	"
Chloride Soda	1.260	"
Chloride Potash	1.742	"
Silica	0.860	"
Lithium	trace.	
Iodine	"	
Bromine	"	
Loss	0.043	"
Organic Matter	trace.	

" 145. *Mineral Water* from the land of *G. G. Peterkin,* one and a half miles from the White Sulphur Springs. Temperature, winter and summer, 59° F. No odor. Has been used for 10 years as a bath, and as such has an exceedingly tonic effect on the system and a very softening effect on the skin. Has been found particularly efficacious in rheumatism; generally after a few baths, the part affected appears covered with a rash, which gradually wears off and the rheumatism along with it. Some very bad cases have been completely cured. A qualitative analysis shows Aluminum, Magnesium, Calcium, Barium, Iron and Carbonate of Soda.

" 146. *Chalybeate Water* from the same land as the last. Temperature about 55° F. No odor. Has been used by many persons as a tonic with marked effects, and as such has been prescribed by the resident physicians.

" 147. *Chalybeate Water* from an untested spring on the land of *G. G. Peterkin,* who thinks it has the same properties as No. 146.

" 148. *White Sulphur Water* from the land of A. R. Humphreys, 1½ miles from Ronceverte. *Cecil Clay,* Ronceverte.

" 149. *Sulpho-Chalybeate Water* from the land of *Cecil Clay* and *R. L. Kestor,* a half a mile from Ronceverte Depot. It has been used by many people as a tonic, with marked effect.

" 150. *Chalybeate Water* from the same land as No. 149. Used as a tonic.

No. 151. *White Sulphur Water* from the White Sulphur Springs. *G. L. Peyton & Co.* This is the most noted mineral water in the Southern States, and on account of its many excellent medicinal virtues the "White" has been a popular and fashionable resort from the time when gentlemen in the far South came all the way to it in their own carriages. Its medicinal properties are Cathartic, Diuretic, Sudorific and Alterative. The flow is 30 gallons per minute, with a temperature of 62° F., winter and summer. Solid matter procured from 100 cubic inches, dried at 212° F., consisting of 65.54 grains;

Sulphate of Lime	31.680	grains.
Sulphate of Magnesia	8.241	"
Sulphate of Soda	4.040	"
Carbonate of Lime	1.530	"
Carbonate of Magnesia	0.506	"
Chloride of Magnesium	0.071	"
Chloride of Calcium	0.010	"
Chloride of Sodium	0.226	"
Proto-Sulphate of Iron	0.069	"
Sulphate of Alumina	0.012	"
Earthy Phosphates	trace.	
Azotized Organic Matter blended with a large proportion of sulphur, about..	0.005	"

Iodine, combined with sodium or magnesium.

Volume of each of the gases in a free state, estimated in 100 cubic inches:

Sulphuretted Hydrogen	0.66
Nitrogen	1.88
Oxygen	0.19
Carbonic Acid	3.67

" 152. *Corn on Stalk.* Yield, 50 bushels per acre. Raised on flat upland by *Harvey Handley.* Manured with plaster, 100 pounds per acre drilled in with the seed. Plowed twice and hoed once.

" 153. *Wheat.* Grown by *W. A. Alexander.*

" 154. *Oats* raised by *Harvey Handley* on upland, black loam soil.

" 155. *Orchard Grass Seed.* Yield 15 bushels per acre. From No. 156.

" 156. *Orchard Grass* raised on hill land, which was sowed 6 or 7 years ago by *Harvey Handley*, Lewisburg.

" 157. *Timothy.* Yield 1½ tons per acre. Soil, black loam; sub-soil, yellow clay. Raised on hill land by *Harvey Handley.*

No. 158 to 197. Collection of forty varieties of woods of the Greenbrier Valley, by *Cecil Clay*, Ronceverte.

Common, or Local Name.	Botanical Name.	Distance from ground at which cut was taken.	Diameter of section.	Height to first limb.
No. 158. *Beech*	Fagus Ferruginea	9′	26″	36′
" 159. *Hornbeam, or Water Beech*	Carpinus Americanus		13″	
" 160. *Hop Hornbeam, or Iron Wood.*	Ostrya Virginica	3′	11″	
" 161. *Red, or Water Birch*	Betula Nigra	14′	36″	30′
" 162. *Shellbark, or Scaly Hickory*	Carya Alba			40′
" 163. *Red, or Pignut Hickory*	" Porcina	5′	21″	35′
" 164. *Buckeye*	Aesculus Flava			
" 165. *White Ash*	Fraxinus Americana	7′	38″	71′
" 166. *White Walnut*	Juglans Cinera	5′	19″	20′
" 167. *Black Walnut*	" Nigra	34′	43″	
" 168. *White Oak*	Quercus Alba	5′	36″	37′
" 169. *Rock Chestnut Oak*	" Monticola	5′	22″	48′
" 170. *Red Oak*	" Rubra	8′	40″	36′
" 171. *Black Oak*	" Tinctoria	6′	29″	49′
" 172. *Locust*	Robinia Pseudacacia	3′	20″	15′
" 173. *Hackberry, or Sugarberry*	Celtis Occidentalis	5′	23″	
" 174. *Sour Gum*	Nyssa Multiflora	6′	17″	50′
" 175. *Sycamore, or Buttonwood*	Platanus Occidentalis	15′	42″	50′
" 176. *Crab Apple*	Pyrus Coronaria	2′	8″	
" 177. *Service, or Juneberry*	Amelanchier Canadensis	3′	7″	
" 178. *Sassafras*	Sassafrass Oficinale	5′	21″	
" 179. *Slippery Elm*	Ulmus Fulva	5′	13″	
" 180. *White Elm*	" Americana	5′	38″	
" 181. *Mulberry*	Morus Rubra	5′	22″	
" 182. *Sugar Maple*	Acer Saccharinum	6′	32″	30
" 183. *White, or Silver Maple*	" Dasycarpum	5′	22″	63′
" 184. *Persimmon*	Diospyra Virginiana	3′	12″	20′
" 185. *Dog Wood*	Cornus Florida	1′	8″	14′
" 186. *Fox Grape Vine*	Vitis Vulpina	4′	6½″	
" 187. *Sumac*	Rhus Typhina	2′	4″	
" 188. *Ivy*	Kalmia Latifoli.a	1′	4″	
" 189. *Laurel*	Rhododonron Maximum	1′	7″	
" 190. *Leather Wood*	Dirca Palustris			
" 191. *Papaw*	Asimina Triloba	2′	9″	
" 192. *Sour Wood*	Oxydendrum Arboreum	3′	14″	25′
" 193. *White Thorn*	Cretaegus Cordata	2′	9″	
" 194. *Red Bud, or Judas Tree*	Circis Canadensis		6″	
" 195. *Indian Wood*	Populus Balsamifera.(?)			
" 196. *Chinquapin*	Castanea Pumila			
" 197. *Willow*	Salix ———			

HAMPSHIRE COUNTY.

No. 198. *Brown Hœmatite*, used at
" 199. *Limestone*, used at
" 200. *Pig Iron*, charcoal, No. 1, cold blast
" 201. " " " " 2, " "
" 202. " " " " 3, " "
" 203. *Fire Clay*,

} *Bloomery Iron Works.*

No. 204. *Brown Hæmatite* from a large deposit (size unknown) 15 miles from Romney, on the land of *C. S. White.*

Peroxide of Iron	73.531
Binoxide of Manganese	4.380
Silica	13.329
Alumina	3.025
Magnesia	0.251
Lime	0.024
Phosphoric Acid	0.241
Sulphuric Acid	1.204
Hygroscopic Water	0.632
Combined Water	3.082
Loss, &c	0.301
	100.000

Iron	51.471 per cent.
Phosphorus	0.105 "
Sulphur	0.481 "

" 205. *Brown Hæmatite.* Vein 16 feet thick. On land of *C. S. White.* 15 miles from Romney.

Peroxide of Iron	75.250
Oxide of Manganese	trace.
Silica	12.035
Alumina	2.199
Phosphoric Acid	0.089
Sulphuric Acid	2.058
Lime	1.254
Magnesia	0.631
Hygroscopic Water	0.750
Combined Water	5.210
Loss, &c	0.524
	100.000

Iron	52.675 per cent.
Phosphorus	0.038 "
Sulphur	0.823 "

" 206. *White Sand* from Blue's Gap, in a cliff several hundred feet high. When in the mass it is hard, but on breaking and exposure to the atmosphere, it weathers down to a very friable state. It is very pure and admirably suited to glass making. *C. S. White.*

" 207. *Embossed Maps* of the United States and of West Virginia, for the use of the blind. Made by *H. H. Johnson.*

" 208. *Photograph.* Institute for the Deaf, Dumb and Blind, Romney.

HANCOCK COUNTY.

No. 209. *Bituminous Coal* from the mine of *J. & D. Hudson*, on King's Creek, 3 miles from the Ohio River. Seam is 3 to 6 feet thick.

" 210. *Sandstone* (building) from 12 feet stratum. } *J. & D. Hudson.*
" 211. *Sandstone* " " " " }

HARDY COUNTY.

No. 212. *Red Hæmatite* from 20-foot vein in Middle Mountain. *S. A. McMechen*, Moorefield.

Peroxide of Iron	72.990
Insoluble Silicious Matter	23.500
Phosphoric Acid	0.122
Sulphuric Acid	0.870
Alumina, Water and Loss	2.518
	100.000

Iron..... 51.09 per cent.
Phosphorus..... 0.053 "
Sulphur..... 0.035 "

No. 213. *Red Hæmatite* from 6-foot vein in Middle Mountain. *S. A. McMechen*, Moorefield.

Peroxide of Iron	84.80
Insoluble Matter	5.90
Phosphoric Acid	1.60
Sulphuric Acid	0.10
Alumina, Water, trace of Lime and Loss	7.60
	100.00

Iron..... 59.36 per cent.
Phosphorus..... 0.698 "
Sulphur..... 0.040 "

" 214. *Brown Hæmatite*, from 14-foot vein in Middle Mountain. *S. A. McMechen*, Moorefield.

Peroxide of Iron	83.47
Protoxide of Iron	4.64
Oxide of Manganese	trace.
Silica	9.40
Alumina	1.81
Phosphoric Acid	0.373
Sulphuric Acid	0.120
Water and loss	0.187
	100.000

Iron..... 62.01 per cent.
Phosphorus..... 0.163 "
Sulphur..... 0.048 "

" 215. *Fossil Ore.* Vein 39 inches thick. Middle Mountain, near Moorefield.

" 216. *Red Hæmatite*, from the land of *James Stump*, on Middle Mountain, near the bend of the South Fork, or about eight miles south of Moorefield. The vein is reported 25 feet thick, with 15 feet of solid ore. This is doubtless from the same vein as No. 212 (which see for analysis.) At Elk Horn Knob, thirteen miles south of Moorefield, this deposit is 26 feet thick, and has 16 feet of solid ore.

" 217. *Red Fossiliferous Iron Ore*, from the same land as the last. Vein is reported as 6 feet thick. This is evidently the same variety of ore as No. 213.

" 218. *Brown Hæmatite*, from the same land as the last two. It is 2,200 feet east of No. 217, and 350 feet west of No. 216.

" 219. *Brown Hæmatite.* Makes a good car-wheel iron, and is No. 1 for boiler plate and bar iron. *Capon Iron Works.*

Peroxide of Iron	64.287
Oxide of Manganese	7.680
Silica	11.771
Phosphoric Acid	1.110
Sulphuric Acid	1.180
Lime	2.657
Magnesia	1.141
Alumina	3.184
Water	6.695
Loss	0.295
	100.000

Iron..... 45.000 per cent.
Phosphorus..... 0.483 "
Sulphur..... 0.472 "

No. 221. *Bloom*, made by
" 222. *Pig Iron*, "
" 223. *Wrought Iron*, cut off from bloom, and bent hot and cold. } *Capon Iron Works.*
" 224. *Limestone*, used by
" 225. *Slag*, produced at
" 226. *Calcareous Marl*, from Middle Mountain, 6 miles south of Moorefield.
" 227. *White Potters' Clay*, from ten miles south of Moorefield, on the land of *J. P. Stump.*
" 228. *Yellow Ochre*,
" 229. " "
" 230. " " } From Lost River, sixteen miles east of Moorefield. *A. M. Wood.*
" 231. " "
" 232. *Ochre*, from the land of *Harmon Scott*, seven miles southwest of Moorefield.
" 233. *Yellow Ochre*, found in large quantities on the land of *Wm. Fisher*, five miles southwest of Moorefield.
" 234. *Sulpho-Chalybeate Water*, from a spring one mile east of Moorefield, on the land of *John W. Duffy*. Average temperature in summer 58° to 60°. Probable flow 900 gallons per 24 hours. Has quite marked effects in diarrhœa and dysentery, and even in the case of chronic dysentery. In some persons slightly alterative. This spring has been frequented for over twenty years on account of its medicinal virtues. It has also been used to some extent in kidney diseases and general debility. Small quantities of gas are constantly emitted.
" 235. *White Sulphur Water* from Howard's Lick or Hardy White Sulphur Springs, 14 miles south of Moorefield. It is a sulphur water of the purest quality. Carbonic Acid escapes from it continually. Temperature in summer, 50°; in winter, 48°. Flow, 65 gallons per hour, and not affected by dry or wet weather. The spring has been a place of resort for 45 years, and its medicinal qualities are well established. It is anti-acid, diuretic and tonic, and in diseases arising from a disordered liver, its curative effects are very marked, giving vigorous appetite and thoroughly digesting food. One gallon contains:

Carbonate of Soda	5.332	grains.
Chloride " "	0.460	"
Sulphate " "	0.189	"
Carbonate of Lime	0.441	"
" " Magnesia	0.200	"
Peroxide " Iron	0.100	"
Silica	0.370	"

The principal gas is Sulphuretted Hydrogen. Contributed by *E. S. & M. S. Alexander*, Moorefield.
" 236. *White Sulphur Water.*
" 237. *Chalybeate Water.*
" 238. *Warm Spring Water*, said to have the same properties as the famous Capon Springs in Hampshire County. } *Capon Iron Works.*
" 239. *Mineral Water* from the mineral well of *Dr. N. D. Parran*, 4 miles south of Moorefield.
" 240. *Corn* from the farm of *Daniel R. McNeal.* Has 5 ears on a stalk. Yield of 140 acres was a fraction over 72 bushels per acre. This yield was obtained by always selecting the top ear for seed. When the experiment was begun, 10 years ago, the yield was not 45 bushels per acre. For the first 3 years there was no perceptible increase. The soil on which this grew is black loam.
" 241. *White Twin Corn* for bread. Grown on sandy loam without any manure. The ground was plowed in April, 1875, about 6 inches deep; planted about 25th April, in rows 3½ feet each way, with 3 stalks in a hill, and plowed 3 times with ordinary shovel plow. Yield, 70 bushels per acre on 8 acres. *Thomas Maslin*, Moorefield.

No. 242. *Yellow Cattle Corn.* Grown on black alluvial land without artificial manure. Ground plowed 8 inches deep in March, 1875; planted about 1st of May, in rows 3 feet, 4 inches x 3 feet, 6 inches, with an average of 3 stalks in a hill. Cultivated by plowing 4 times with ordinary shovel plow, as deep as the ground was broken. Yield, 90 bushels per acre on a field of 20 acres. *Thomas Maslin,* Moorefield.

" 243. *White Hominy Corn.* Grown upon sandy loam which has been in corn for 10 consecutive years without fertilizer of any kind. The land was plowed 15th of April, 1875, and planted 25th of April, in rows 3 feet, 9 inches x 3 feet, 9 inches, with 3 stalks on a hill. Was plowed each way 4 times with single shovel plow. Yield, 46 bushels per acre. *Thomas Maslin,* Moorefield.

" 244. *Fox's Yellow Hog Corn.* Grown on alluvial river-bottom land which has been cultivated in corn for consecutive years, since the advent of the first white settlers in the South Branch Valley, and no artificial manures have ever been used upon it. The ground was broken 8 inches deep in March, 1875, and planted on 20th of April, in rows 3 feet, 6 inches x 3 feet, 6 inches, with an average of 3 grains in a hill. Plowed 4 times with one-horse shovel plow, as deep as the ground was broken. Yield, 91 bushels per acre on 25 acres. *Thomas Maslin,* Moorefield.

" 245. *Tappahannock Smooth Wheat.* Grown in sandy loam which was in corn the preceding year. Yield, 32 bushels per acre. Weight, 62 pounds. *G. T. Williams,* Moorefield.

" 246. *Red-Bearded Lancaster Wheat.* Sown broadcast in October, 1874, on black alluvial bottom land, on prepared wheat stubble. Yield, 28 bushels per acre. Weight, 62 pounds. *James Bean,* 4 miles southwest of Moorefield.

" 247. *Norway Black Oats* from black alluvial land. Yield, 36 bushels per acre. Weight, 38 pounds. *James Bean.*

" 248. *White or Ohio Oats.* Grown on a limestone mountain top. Yield, 48 bushels per acre. Weight, 42 pounds. Contributed by *Hayden Wilson,* 15 miles from Moorefield.

" 249. *Common Buckwheat.* Grown on slatey clay hill land. Yield, 22 bushels per acre. Contributed by *Peter Bean,* 12 miles from Moorefield.

" 250. *Silver Hull Buckwheat.* Grown on slatey clay hill land. This matured 3 or 4 weeks earlier than the common kinds. If it is sown on wheat stubble after harvest, it will mature before frost. Contributed by *Peter Bean.*

HARRISON COUNTY.

No. 251. *Bituminous Coal* from the Pittsburgh seam, as worked by the *Despard Gas Coal Co.,* near Clarksburg. Seam 9 feet thick. The coal is especially suited to gas.

Volatile Matter	40.00
Fixed Carbon	53.30
Ash	6.70
	100.00

2,240 pounds yields 9,500 cubic feet of gas of 20.41 candle power, and 36 bushels of good coke, weighing 1,541 pounds. Maximum yield of 2,240 pounds is 10,767 cubic feet.

" 252. *Bituminous Coal* from the Pittsburgh seam, as worked by the *Murphy's Run Coal Mine,* near Clarksburg. Seam is 9 feet thick. The coal is especially adapted to gas.

Water	1.575
Volatile Matter	37.105
Fixed Carbon	49.080
Sulphur	2.840
Ash	9.400
	100.000

Average yield of gas per 2,240 pounds is 11,401 cubic feet of 17.2 candle power.

No. 253. *Bituminous Coal* from the Pittsburgh seam, as worked by the *Monongahela Gas Coal Co.*, Wilsonburg. Seam is 8 feet thick. Coal is especially adapted to gas.

" 253½. *Peacock Coal* from the same place as the last.

" 254. *Red Hæmatite* plowed up in a field of *Eli Bond*, Lost Creek. Is evidently from the "Red Bands" of the Lower Barren Measures.

" 255. *White Corn.* *B. D. Rider*, West Milford.

" 256. *Yellow Corn.* } *George Waters*, Coburn Creek.
" 257. *White Corn.* }

" 258. *White Corn.* } *James Hickman*, Elk Creek.
" 259. *Yellow Corn.* }

" 260. *Yellow Corn.* Yield, 200 bushels of ears. *Daniel Bassel*, Lost Creek.

" 261. *White Corn.* *D. Morrison*, West Milford.

" 261. *Tappahannock Wheat.* *P. W. Bartlett*, West Fork.

" 262. *Tappahannock Wheat.* *Bartlett & Riley*, West Fork.

" 263. *White Wheat.* *J. P. Rice*, Ten Mile Creek.

" 264. *White Wheat.* (2 samples.) *D. Bassett*, Lost Creek.

" 265. *White Wheat.* *R. H. Green*, West Fork.

" 266. *White Wheat.*

" 267. *Buckwheat.*
" 268. *Oats.* *B. D. Rider*, West Milford.

" 269. *Timothy Hay.*

" 270. *White Walnut.* *Robert Hamon*, Clarksburg.

JACKSON COUNTY.

No. 271. *White Corn*, yielding 60 bushels per acre on upland; red clay. Grown by *Josephus Sayre.*

" 272. *Red Wheat*, yields 20 bushels per acre on upland red clay. Grown by *A. D. Hopkins.*

" 273. *White Wheat*, yields 20 bushels per acre. From the same farm as No. 512.

JEFFERSON COUNTY.

No. 274. *Brown Hæmatite.*

" 275. " " from the depoist worked by the Antietam Iron Furnace, near Shepherdstown. *A. R. Boteler*, Shepherdstown.

" 276. *Black Marble*, from the land of *S. W. Strider*, Halltown.

" 277. *White Marble*, } From land of *J. S. Strider*, Halltown. The quarries
" 278. *Black Marble.* } are near the Valley Railroad.

" 279. *Grey Marble*, from Knott's Quarry, below Shepherdstown. *A. R. Boteler.*

" 280. *White Marble*, from farm of *R. Rall.*

" 281. *Hydraulic Limestone.* The quarry is about 60 miles from Washington, on the C. & O. Canal and the Potomac River. The deposit shows a frontage on the river of ½ mile, has a perpendicular depth of 30′, and a horizontal depth of many hundred feet.

Carbonate Lime	55.80	*Potomac Mining and Manufacturing Co., near Shepherdstown.*
" Magnesia	39.20	
Alumina and Oxide of Iron	1.50	
Silica and Insoluble Matter	2.50	
Water and Loss	1.00	
	100.00	

" 282. *Hydraulic Cement.*

" 283. " " after having been "set" under water.

" 284. *Yellow Ochre*, in large quantities near Shepherdstown. *A. R. Boteler.*

No. 285. *Barytes*, from a reported "large deposit," 8 miles from the B. & O. R. R., and 4 miles from the Winchester branch of the same. *J. Hamilton*, Kearneysville.

" 286. *Yellow Corn.* Yield 60 to 70 bushels per acre. *G. Koontz.*

" 287. *Red Wheat.* Yield 20 to 25 bushels per acre. *Geo. H. Turner*, Bloomery Mills.

" 288. *Photograph.* Shepherd College, Shepherdstown. *Oil Painting*, "The Halt of the Stonewall Brigade." By *D. E. Henderson*, Leetown.

KANAWHA COUNTY.

No. 289. *Cannel Coal*, from the *Mill Creek Cannel Coal Company*, Wardingfield. Seam where the sample was taken was 5½ feet thick.

" 290. *Cannel Coal*, from the mine on Falling Rock Creek, Elk River.

Volatile Matter	43.20
Fixed Carbon	50.80
Ash	6.00
	100.00

2,240 pounds of coal gives 13,400 cubic feet of gas of 25 candle power.

" 291. *Bituminous Coal*, from the *Lewiston Coal Company.* Seam 4 to 6 feet thick.

" 292. *Splint Coal*, from the top of the Campbell's Creek, 6 feet seam.

" 293. *Splint Coal*, from the bottom of the Campbell's Creek, 6 feet seam. } *J. D. Lewis*, Malden.

" 294. *Splint Coal*, from the *Enterprise Coal Company.* Height of seam whence the section was taken is 6 feet 3 inches.

" 295. *Splint Coal.* Seam 7 feet thick. From the mine of the *Kanawha Semi-Cannel Coal Company.*

" 296. "*Block*" *Coal*,
" 297. *Splint* " } From land of *W. M. Hovey*, Davis' Creek.
" 297 to 303.

Note: The next six specimens are each from a different seam in one hill, and all above water level. The enumeration begins with the highest and runs down in stratagraphical order.

" 297. *Coal* from the "Lewiston seam;" 4 feet of pure splint. House and steam coal.

" 298. *Coal* from the "Coalburg Seam;" 7 feet thick, with a 10-inch slate parting. House and steam coal.

" 299. *Coal* from "Cedar Grove Seam." Good for gas, engine, and blacksmithing.

" 300. *Cannel Coal* from an outcrop 28 inches thick.

" 301. *Gas Coal* from outcrop 3½ feet thick, with 6 inches of slate 6 inches from the floor. Good for gas, steam and blacksmithing. } *Kanawha Semi-Cannel Coal Co.*

" 302. *Bituminous Coal* from the "Blacksburg Seam," 3½ feet thick. A very rich gas coal, the yield per 2,240 pounds being 10,640 cubic feet of 18 candle power.

" 303. *Black Band Iron Ore* from the dividing ridge between Davis and Briar Creeks.

Silica	4.64
Carbonate of Iron	68.35
Phosphoric Acid	0.57
Sulphur	0.42
Carbonaceous Matter	26.02
	100.00

Iron.....33.27 per cent.

Also some lime and alumina. Thoroughly roasted, it contains 65 per cent. of iron, while there is more than enough carbonaceous matter to roast it. } *T. L. Broun, Charleston.*

" 304. *Roasted Black Band Iron Ore*, from the above.

No. 305. *Black Band Iron Ore*, raw.
" 306. *Black Band Iron Ore*, roasted.
" 307. *Nodular Brown Hœmatite.*
" 309. *Carbonate of Iron.*
} From land of *W. M. Hovey*, Davis' Creek.

" 310. *Black Band Iron Ore* from the outcrop, and representing 4½ feet of the seam, measuring from the bottom. From land of *Emmons & Hovey*, Briar Creek.

" 311. *Sandstone* (building,) from a 9½ feet stratum. *L. Ruffner & John D. Lewis.*

" 312. *Salt.*
" 313. *Salt.*
" 314. *Salt.*
" 315. *Settled Brine*, boiled to 22° B.
" 316. *Brine* as pumped from ground. Strength 11° B.
" 317. *Bittern*, the refuse of salt manufacture, all salt having been extracted.
} *Kanawha Salt Co.*

" 318. *Black Flint* from a 6 foot stratum, a well-defined geological landmark of the country. *Lewis & Ruffner.*

" 319 to No. 338. Collection of 19 of the woods of the Kanawha Valley. By *L. Ruffner & J. D. Lewis.*

	Common Name.	Botanical Name.	Diameter of Section.
No. 319.	*Yellow Poplar*	Liriodendron Tulipifera	5′
" 320.	*White Oak*	Quercus Alba	4½′
" 321.	*Chestnut*	Castania Vesca	3½′
" 322.	*Red Hickory*	Carya Porcina	3½′
" 323.	*Ash*	Fraxinus Americana	3½′
" 324.	*Chestnut Oak*	Quercus Prinus	3¼′
" 325.	*Beech*	Fagus Ferruginea	3′
" 326.	*White Hickory*	Carya Tomentosa	2′ 10″
" 327.	*Red Oak*	Quercus Rubra	2′ 10″
" 328.	*Buckeye*	Aesculus Glabra	2′ 8″
" 329.	*Sugar*	Acer Saccharinum	3′
" 330.	*Maple*	" Rubrum	2′ 10″
" 331.	*Yellow Pine*	Pinus Mitis	2′ 1″
" 332.	*Black Locust*	Robinia Pseudacacia	1′ 6″
" 333.	*Birch*	Betula	1′ 10″
" 334.	*Sassafras*	Sassafras Oficinale	1′ 10″
" 335.	*Yellow Gum*	Nyssa Multiflora	2′ 10″
" 336.	*Black Walnut*, (curly,)	Jnglans Nigra	
" 337.	*Hackberry*	Celtis Occidentalis Crassifolia	1′

" 338. *Photograph*, Union School, Charleston.
" 339. *Pupils' Work* of Public Schools, "

LEWIS COUNTY.

No. 340. *Sandstone*, used in the construction of the Insane Asylum, at Weston. *Dr. T. B. Camden.*

" 341. *Yellow Ochre*, from a deposit 2½ to 3 feet thick, on the land of *P. T. Smith*, near Weston.

" 342. *Orinoco Tobacco*, grown on a clay soil, with a southern exposure, by *G. W. Ballard.*

LINCOLN COUNTY.

No. 343. *Splint Coal*, from a 5 foot seam on 9 mile creek of Guyandotte River.

" 344. *Splint Coal*, from a 4 foot seam on a 4 mile creek of Guyandotte River, on lands of *Aspinwall & Low.*

No. 345. *Splint Coal*, from the McComas Bank, 8 feet thick, on the Guyandotte River, about 5 miles above the Falls.

MARION COUNTY.

No. 346. *Bituminous Coal*, from the "Pittsburg Seam," as worked by the *Gaston Mine*, at Fairmount. Seam is 8 to 9 feet thick. The coal is especially adapted to gas.

Coke	67.5
Volatile Matter	32.5
	100.0
Ash in Coal	2.1
Sulphur in Coal	0.95
" " Coke	0.69
" " Volatile Matter	0.27

2,240 pounds of coal has a maximum production of 11,043.2 cubic feet of 16 candle power.

" 347. *Bituminous Coal*, from the "Redstone" seam, which in Marion County lies 60 to 80 feet above the "Pittsburg." From the land of *R. S. Radcliffe*. Thickness at the place whence the specimen was taken is 6 feet 4 inches.

Water	1.009
Volatile Combustible Matter	40.967
Fixed Carbon	50.327
Ash	7.697
	100.000
Sulphur in Coal	4.266 per cent
" " Coke	2.863 "

" 348. *Carbonate of Iron*, from an 18-inch seam, 1½ miles from B. & O. R. R., and 2½ miles from Nuzum's Mill, on the land of *A. E. Garloe.*

" 349. *Limestone*, from a heavy stratum on the land of *R. S. Radcliffe.*

" 350. *Fire Brick*, from *Glade Fire Brick Company*, Nuzum's Mills.

" 351. *Fire Clay*, from *Glade Fire Brick Company*, Nuzum's Mills. Seam 4½ feet thick. These bricks are used for furnaces in all parts where great heat is required. Capacity of the works 4,000 bricks per day. "This clay is superior to that from Mount Savage, as it contains *no trace* of oxide of iron (the greatest enemy to a refractory nature in fire clays), while Mount Savage has 1.5 per cent." (C. E. Dwight, chemist.)

Hygroscopic Water	0.70
Combined Water and Organic Matter	8.35
Silica	45.86
Alumina	44.23
Lime	0.24
Magnesia	0.36
Oxide Manganese	trace.
Oxide of Iron	none.
Potash and Soda	trace.
Loss	0.26
	100.00

" 352. *Potters' Clay*, used at Palatine. From land of *R. M. Hill.*

" 353. *Yellow Corn*, } *R. E. Fleming.*
" 354. *Wheat.* }

" 355. *Pupils' Work.* Fairmount Normal School.

" 356. " " Public Schools, Fairmount.

MARSHALL COUNTY.

No. 357. *Corn on Stalk*, 14½ feet high. Grown by *Wm. Gray*, 3 miles southwest of Cameron.

No. 358. *Wool.* Bucks fleece, 18 lbs. unwashed.
Wool. 9 samples of thoroughbred American Merino. } Grown by *S. A. Cockayne*, Moundsville.

" 358½. *Wool.* 5 Buck and 5 Ewe fleeces. Grown by *Jno. Ingram.*

" 359. *Pupils' Work,* of Graded Normal School, Moundsville.

" 360. " " " Public School, Benwood.

" 361. " " " other Public Schools in the County.

MASON COUNTY.

No. 362. *Bituminous Coal,* from the "Pittsburg" seam, where worked by the *Hartford City Coal and Salt Company.* Thickness of seam 5 to 6 feet.

Water	3.430
Volatile Combustible Matter	44.382
Fixed Carbon	46.880
Ash	5.308
	100.000

Sulphur in Coal.....1.567 per cent.
" " Coke.....1.929 "

" 363. *Bromine,* from the works of *H. Lerner,* Mason City.

" 364. *Model of Steamboat Hull,* to give high speed at high stages of water, and the flatness of the bottom is to overcome shoal water. *John Young,* Mason City, builder.

" 365. *Photograph.* Public School, Clifton.

" 366. *Pupils' Work.* " " Point Pleasant.

MINERAL COUNTY.

No. 367. *Semi-bituminous Coal,* from the "Pittsburg seam," as worked by the *Virginia Coal Company,* near Peedmont. Seam is 14 feet thick, with one parting 1½ inches thick, 4 feet from the floor. It is especially adapted to steam and blacksmithing.

	Top Coal.	Bottom Coal.
Volatile Matter	19.363	17.512
Carbon	75.863	79.013
Water	0.820	0.499
Ash	3.954	2.976
	100.000	100.000
Sulphur in Coal	0.713	1.133
" " Coke	0.813	1.125

MONONGALIA COUNTY.

No. 368 to 388. A series of specimens contributed by *W. S. Willey,* of Morgantown, and intended to illustrate the minerals of the Coal Measures in Monongalia County. The innumeration begins with the lowest and proceeds in regular stratagraphical order to the highest.

" 368. *Limestone* from a 100′ stratum (8 miles east of Morgantown), a large portion of which makes a lime, which in whiteness and quality is claimed to be scarcely inferior to the Louisville lime. This stratum underlies the Lower Coal Measures.

Carbonate Lime	87.836
" Magnesia	1.101
" Iron	0.550
Silica	9.200
Alumina	0.354
Sulphate Lime	0.125
Phosphate "	0.016
Water	0.473
Loss	0.345
	100.000

No. 369. *Carbonate of Iron* from the "Martin Vein," which is 18 inches thick at the outcrop.

Carbonate Iron	61.012
Peroxide "	3.443
Carbonate Lime	11.950
" Magnesia	2.101
Oxide Manganese	0.012
Silica	15.144
Alumina	4.482
Phosphoric Acid	0.534
Sulphuric "	0.367
Water	0.642
Loss	0.313
	100.000

Iron	31.865	per cent.
Phosphorus	0.233	"
Sulphur	0.147	"

" 370. *Carbonate of Iron.* Known as the "England Ore." Seam 18 inches thick.

Carbonate of Iron	69.610
Peroxide of Iron	1.790
Oxide of Manganese	trace.
Silica	20.750
Alumina	1.231
Carbonate of Lime	4.913
Carbonate of Magnesia	0.210
Phosphoric Acid	0.710
Sulphuric Acid	0.301
Water	0.482
Loss	0.003
	100.000

Iron	34.678	per cent.
Phosphorus	0.310	"
Sulphur	0.120	"

" 371. *Sand,* supposed to be well suited for the manufacture of glass. Stratum 30 feet thick.

" 372. *Carbonate of Iron,* known as the "Stratford Ore," 18 inches thick.

Corbonate of Iron	39.191
Peroxide of Iron	11.889
Oxide of Manganese	trace.
Carbonate of Lime	26.050
Carbonate of Magnesia	2.450
Silica	15.553
Alumina	2.121
Phosphoric Acid	0.891
Sulphuric Acid	0.421
Water	1.020
Loss	0.413
	100.000

Iron	27.240	per cent.
Phosphorus	0.388	"
Sulphur	0.168	"

No. 373. *Brown Hæmatite*, known as the "Spring Hill Ore," 30 inches thick.

Peroxide of Iron	70.490
Prot. Oxide of Iron	0.706
Silica	14.414
Lime	2.278
Magnesia	1.112
Alumina	2.103
Oxide Manganese	1.066
Phosphoric Acid	0.441
Sulphuric Acid	0.318
Hygroscopic Water	0.648
Combined "	6.214
Loss	0.210
	100.000

Iron	49.685	per cent.
Phosphorus	0.192	"
Sulphur	0.127	"

" 374. *Fire Clay*, 4 feet thick at outcrop. Not mined.

Silica	54.266
Alumina	33.830
Protoxide of Iron	0.011
Lime	trace.
Magnesia	0.021
Potash and Soda	trace.
Hygroscopic Water	1.000
Combined Water	10.855
Organic Matter	0.150
	100.000

" 375. *Limestone*, from a 5 foot stratum.

Carbonate of Lime	80.655
Carbonate of Magnesia	3.921
Carbonate of Iron	5.427
Oxide of Manganese	0.384
Silica	6.549
Alumina	2.100
Phosphate of Lime	trace.
Sulphate " "	"
Water	0.654
Loss, &c	0.310

" 376. *Carbonate of Iron.* Known as the "Swisher Ore."

Carbonate of Iron	59.680
Peroxide of Iron	18.758
Carbonate of Lime	5.219
Carbonate of Magnesia	0.311
Oxide of Manganese	1.410
Silica	13.040
Alumina	0.312
Phosphoric Acid	0.368
Sulphuric Acid	0.491
Water	0.382
Loss	0.029
	100.000

Iron	41.941	per cent.
Phosphorus	0.160	"
Sulphur	0.196	"

No. 377. *Bituminous Coal*, from the "Upper Freeport seam," 5 feet thick.

Water	0.632
Volatile Combustible Matter	28.060
Fixed Carbon	54.276
Ash	17.032
	100.000

Sulphur in Coal..... 0.772 per cent.
" " Coke..... 0.604 "

" 378. *Brown Hæmatite*, from a 24-inch seam, known as the "Haines Ore."

Per Oxide of Iron	57.705
Prot. Oxide of Iron	1.222
Oxide of Manganese	3.341
Silica	18.191
Alumina	2.103
Carbonate of Lime	5.600
Carbonate of Magnesia	2.104
Phosphoric Acid	1.990
Sulphuric Acid	0.742
Hygroscopic Water	0.561
Combined Water	6.241
Loss	0.200
	100.000

Iron..... 41.354 per cent.
Phosphorus..... 0.867 "
Sulphur..... 0.296 "

" 379. *Carbonate of Iron*, from an 18-inch seam, known as the "Scott Ore."

Carbonate of Iron	49.810
Peroxide of Iron	23.803
Oxide of Manganese	2.428
Carbonate of Lime	13.251
Carbonate of Magnesia	3.112
Silica	4.056
Alumina	1.481
Phosphoric Acid	0.630
Sulphuric "	0.542
Water	0.684
Loss	0.203
	100.000

Iron..... 40.708 per cent.
Phosphorus..... 0.274 "
Sulphur..... 0.216 "

" 380. *Carbonate of Iron*, from an 18-inch seam, known as the "Hastings Ore."

Carbonate of Iron	51.674
Peroxide of Iron	7.545
Oxide of Manganese	0.231
Carbonate of Lime	19.256
Silica	15.980
Carbonate of Magnesia	1.350
Alumina	1.250
Phosphoric Acid	0.694
Sulphuric Acid	0.820
Water	0.760
Loss	0.440
	100.000

Iron..... 30.240 per cent.
Phosphorus..... 0.302 "
Sulphur..... 0.328 "

" 381. *Freestone*, for building. The *browner block* is from the quarry where the stone is got for the lock lately constructed by the United States on the Monongahela River, in this county. The *smaller, or white block*, is from the quarry from which they are constructing the dam at said lock. These stones are rated as most superior articles by the Government Engineers in charge of the work.

" 382. *Carbonate of Iron*, from the "Clippart Vein," 2 feet thick.

Carbonate of Iron	62.599
Peroxide of Iron	2.543
Oxide Manganese	0.020
Silica	21.620
Alumina	3.210
Carbonate of Lime	8.366
Carbonate of Magnesia	0.311
Phosphoric Acid	0.410
Sulphuric Acid	0.220
Water	0.480
Loss	0.221
	100.000

Iron	32.000	per cent.
Phosphorus	0.179	"
Sulphur	0.088	"

" 383. *Bituminous Coal*, from the "Pittsburg Seam," 11 feet thick. Clear coal 9½ feet.

Water	0.385
Volatile Combustible Matter	38.639
Fixed Carbon	54.775
Ash (Grey)	6.201
	100.000

Sulphur in Coal	2.544
Sulphur in Coke	2.194

The sulphur exists as sulphate of lime or magnesia, and not as pyrites.

" 384. *Bituminous Coal*, from the "Redstone Seam," 5 feet thick.

Water	0.370
Volatile Combustible Matter	37.877
Fixed Carbon	54.358
Ash (Grey)	7.395
	100.000

Sulphur in Coal	2.870
Sulphur in Coke	2.850

The sulphur seems to be in combination with lime or magnesia, and not as iron pyrites.

" 385. *Bituminous Coal*, from the "Sewickley Seam," 6 feet thick.

Water	0.440
Volatile Combustible Matter	35.781
Fixed Carbon	54.309
Ash (Grey)	9.470
	100.000

Sulphur in Coal	3.100
Sulphur in Coke	2.785

The sulphur exists mainly as sulphate of lime and magnesia, and not as Iron pyrites.

No. 386. *Bituminous Coal,* from the "Waynesburg Seam," 5 or 6 feet thick.

Water	0.740
Volatile Combustible Matter	35.358
Fixed Carbon	56.356
Ash (Light Buff)	7.546
	100.000
Sulphur in Coal	0.705
Sulphur in Coke	0.846

" 387. *Limestone,* selected indifferently between the last four coals.

" 388. *Cedar.*
" 389. *Spruce.*
" 390. *White Walnut.*
" 391. *Black Walnut.*
" 392. *White Oak.*
" 393. *Hickory.*
" 394. *Poplar.*
" 395. *Common Locust.*
" 396. *Wild Black Cherry.*
" 397. *White Ash.*
" 398. *Sugar Maple.*
" 399. *Linden, or Basswood.*
" 400. *Chestnut.*

Sample boards from *Fairchild, Lawhead & Co.,* Morgantown, Carriage Manufacturers.

" 401. *Curley Walnut,* boards. *Walter Mestrezall,* Morgantown.
" 402. *Pencil Drawing* of H. W. Beecher. By *Perry Morris.* } Free School,
" 402½ *Pencil Drawing* of E. L. Cox. By *W. C. Schafer.* } Morgantown.

MONROE COUNTY.

No. 403. *Marble.* The deposit is seemingly very large, and had only been discovered a few days before the specimens were sent on. From the farm of *J. Osborne,* near Monroe, and 12 miles from the C. & O. R. R.

MORGAN COUNTY.

No. 404. *Brown Hæmatite,* from vein 2½ feet thick, 1½ miles from B. & O. R. R. *U. Mendenhall,* Sir John's Run.
" 405. *Brown Hæmatite,* from vein 6 feet thick, 1½ miles from B. & O. R. R. *U. Mendenhall,* Sir John's Run.
" 406. *Limestone,* adjoining No. 404.
" 407. *Glass Sand,* " " 406, and in vast quantities.
" 408. *Pupils' Work.* Public School, Sir John's Run.

OHIO COUNTY.

No. 409. *Bituminous Coal,* from the "Pittsburg Seam," where worked by *M. L. Hill,* Wood's Run, 4 miles from Wheeling. Seam was 7 feet 3 inches thick where the specimen was obtained.

	Top Coal.	Bottom Coal.
Water	1.748	1.525
Volatile Combustible Matter	42.969	38.440
Fixed Carbon	50.985	47.773
Ash	4.303	12.262
	100.000	100.000
Sulphur in Coal	2.884	3.823
" " Coke	3.061	4.880

" 410. *Bituminous Coal,* from the "Pittsburg Seam," on the land of the *Boggs Run Mining Company,* Wheeling. Seam is 6 feet thick, and 10 feet above the track of the B. & O. R. R.

No. 411. *Carbonate of Iron*, from Wheeling Hill. The seam is made up of 20 to 22 inches of ore; 2 feet of shale and 20 to 22 inches of ore.

Carbonate Iron	48.788
" Lime	41.216
Oxide Manganese	6.434
Silica	1.310
Alumina	0.960
Phosphoric Acid	trace.
Sulphuric "	"
Water and Loss	0.292
	100.000

Iron ..... 23.55 per cent.

" 412. *Sandstone* (building), from a 12-foot quarry on Short Creek, on the land of *J. and M. Waddle.*

" 413. *Sandstone* (building), from a 35 to 40 foot stratum, on the land of the *Boggs Run Mining Company*, Wheeling.

" 414. *Whetstones.* Stratum 12 feet. On the land of *George Sawtall*, Short Creek, 3 miles from the Ohio River.

" 415. *Limestone.* Stratum 6 feet. On land of the *Boggs Run Mining Company*, Wheeling.

" 416. *Limestone*, used at Belmont Furnace for flux. From Willow Grove, 4 miles from Wheeling.

Carbonate Lime	85.954
" Magnesia	1.381
" Iron	0.640
Silica	7.611
Alumina	3.460
Water and loss	0.954
	100.000

" 417. *Hydraulic Limestone*, from Riley's Hill, Wheeling. Stratum 9 feet. *A. J. Lang*, Wheeling.

Carbonate Lime	48.73
" Magnesia	28.30
Silica	15.35
Alumina	5.38
Water or Oxide Iron	2.24
	100.00

" 418. *Hydraulic Cement*, made from No. 417. By *A. J. Lang.*

" 419. *Hydraulic Limestone*, from a 6-foot stratum on the land of the *Boggs Run Mining Company*, Wheeling.

" 420. *Limestone.* Stratum 4 feet thick. On the land of *Jesse Wells*, 7 miles above Wheeling, on the river. Is used as a flux at the *Jefferson Iron Works*, near Steubenville, Ohio.

Carbonate Lime	83.84
" Magnesia	1.75
" Iron	1.03
Silica	10.00
Alumina	3.00
Water and Loss	0.38
	100.00

" 421. *Hydraulic Limestone*, from *O. D. Thompson's*, Willow Glen Coal property, 4 miles from Wheeling, on the Hempfield R. R. The stratum is 6 feet thick, and the same as No. 417.

Carbonate Lime	48.30
" Magnesia	29.51
" Iron	4.50
Silica	12.43
Alumina	3.94
Water and Loss	1.32
	100.00

No. 422. *White Gourd Seed Corn*, grown by *J. and M. Waddle*, of West Liberty, on hill meadow sod and sandy calcareous soil. Crop was injured by winds and worms, but nevertheless yielded in different parts of the field from 50 to 60 bushels per acre.

" 423. *Corn*, grown on lime and sandy soil by *G. W. Wilson*, Short Creek. First crop from sod ground, no manure. Planted in hills 3½ feet apart on the average. From 3 to 4 stalks in a hill. Average, 121 bushels of shelled corn per acre.

" 424. *Tobacco*, in the leaf and cigars. Manufactured by *H. Seamon*, Wheeling.

" 425. *Oil Painting*, from nature. "Elk River, near Charleston," Kanawha Co. By *Miss Crumbacker*, of the Doddridge Music and Art School, Wheeling.

" 426. *Oil Painting*, enlarged from photograph. "Artist's Nook," near Kanawha Falls, Fayette County. By *Miss Reed*, of the Doddridge Music and Art School, Wheeling.

" 427. *Oil Painting*, enlarged from photograph. "Harper's Ferry," Jefferson County. By *Miss Wallace*, of the Doddridge Music and Art School.

" 428. *Oil Painting.* By *Miss Ella Updergraff*, of Doddridge Music and Art School, Wheeling.

" 429. *Oil Painting*, "Springtime." By *Miss Mattie D. Hubbard*, of the Doddridge Music and Art School, Wheeling.

" 430. *Oil Painting*, from nature, "Wheeling and Vicinity." By *Miss A. M. Doddridge*, Principal of the Doddridge Music and Art School. Wheeling.

" 431. *Oil Painting*, "Tasayac," Yosemite Valley. By *Miss A. M. Doddridge*, Principal of the Doddridge Music and Art School, Wheeling.

" 432. *Water Color Painting*, flowers. By *Miss T. V. Doddridge*, Principal of the Doddridge Music and Art School, Wheeling.

" 433. *Photographic Views.* Public School Buildings, Wheeling.

" 434. *Pupils' Work.* Union Public School.
" 435. " " Washington Public School.
" 436. " " Colored " "
" 437. " " Madison " "
" 438. " " Webster " "
" 439. " " Clay " "
" 440. " " Centre " "
" 441. " " Ritchie " "
" 442. " " Mont de Chantal Academy.
" 443. " " St. Joseph's "
" 444. " " Business College.
" 445. *Catalogues.* Female Seminary.
" 446. *Vocal Culture.* Mont de Chantal Academy.
" 447. *Map of West Virginia.* Thos. Memminger.

} Wheeling.

PENDLETON COUNTY.

No. 448. *Red Hæmatite*, has never been mined, but was traced for 6 feet down and supposed to be deeper. It crops out in several places for miles. Is 36 miles from the Valley R. R. *Henry Dickinson*, Franklin.

Peroxide of Iron	80.336
Silica	5.722
Alumina	7.291
Lime	1.517
Magnesia	0.482
Phosphoric Acid	1.331
Sulphuric "	1.070
Water	1.864
Loss	0.387
	100.000

Iron	56.232 per cent.
Phosphorus	0.580 "
Sulphur	0.428 "

No. 449. *Red Hœmatite*, from Ore Mountain, from the land of *Mrs. Deneza Davis*, Upper Tract, and 35 miles from the Valley R. R. Deposit reported "to be of great thickness."

Peroxide of Iron	80.838
Oxide of Manganese	trace.
Lime	"
Magnesia	"
Silica	17.544
Alumina	1.266
Phosphoric Acid	0.026
Sulphuric "	0.423
Water	1.020
	101.117

Iron	56.586 per cent.
Phosphorus	0.011 "
Sulphur	0.169 "

" 450. *Red Hœmatite.* Deposit reported to be 10 feet. Is 35 miles from Valley R. R. *George Miller*, Upper Tract.

Peroxide of Iron	70.201
Oxide of Manganese	trace.
Silica	17.361
Alumina	3.503
Lime	0.456
Magnesia	1.489
Phosphoric Acid	2.400
Sulphuric Acid	1.345
Water	2.754
Loss	0.491
	100.000

Iron	49.137 per cent.
Phosphorus	1.046 "
Sulphur	0.538 "

" 451. *Red and Brown Hœmatite, mixed*, a part of No. 450.

Peroxide of Iron	50.010
Silica	37.151
Alumina	8.390
Lime	0.756
Magnesia	0.432
Phosphoric Acid	0.080
Sulphuric "	0.925
Water	1.877
Loss	0.379
	100.000

Iron	35.010 per cent.
Phosphorus	0.035 "
Sulphur	0.370 "

No. 452. *Brown Hœmatite.* Vein has never been worked, but is "supposed to be in very considerable quantities." Is 40 miles from the Valley R. R. *J. C. Boggs,* Franklin.

Peroxide of Iron	63.470
Oxide of Manganese	3.150
Silica	18.000
Alumina	5.707
Phosphoric Acid	0.300
Sulphuric "	1.575
Lime	0.146
Magnesia	0.713
Hygroscopic Water	0.432
Combined "	6.197
Loss	0.310
	100.000

Iron	44.429 per cent.
Phosphorus	0.131 "
Sulphur	0.730 "

" 453. *Brown Hœmatite. J. F. Johnson,* Franklin.

Peroxide of Iron	55.706
Silica	18.110
Alumina	13.463
Phosphoric Acid	0.090
Sulphuric "	2.147
Lime	1.321
Magnesia	0.120
Hygroscopic Water	0.732
Combined "	7.799
Loss	0.512
	100.000

Iron	38.994 per cent.
Phosphorus	0.039 "
Sulphur	0.858 "

" 454. *Alum Water,* from *J. F. Johnson's* Alum Spring, near Franklin. Is used by the citizens for dysentery and dyspepsia.

" 455. *Yellow Corn.* Yield in an ordinary season is about 60 bushels per acre. Grown on sandy loam by *Solomon Cunningham.*

" 456. *Corn.* Yield 70 bushels per acre. Grown on South Branch bottom land, a sandy loam, by *J. P. Dyer,* Port Seybut.

" 457. *Broughton Wheat.* Yield 30 bushels per acre. Slightly manured and put in with drill. Grown on South Branch bottom land, clay loam, by *W. C. Millar,* Port Seybut.

" 458. *Wild Cherry,* 21 inches diameter.
" 459. *Yellow Pine* 25 " " } *Jacob Hammer,* Franklin.

" 460. *White Oak,* 25 inches diameter.
" 461. *Black Walnut,* 27 inches diameter. } *J. F. Johnson,* Franklin.

" 462. *Locust,* 18 inches diameter. *Balser Hammer,* Franklin.

" 463. *Laurel.*
" 464. *Wreath Vine.* } *N. J. Banjay,* Port Seybut.

PLEASANTS COUNTY.

No. 465. *Sandstone* (building). Quarry about 40 feet thick. *R. W. Browse,* Grape Island.

No. 466. *Petroleum*, from a 600 foot well on the bank of the Ohio River, 1½ miles below St. Mary's. Pumps 3 to 4 barrels per day. *W. W. Hall*, St. Mary's.

" 467. *Brine*, from French Creek, about 1½ miles from the Ohio River. Well is 600 feet deep, and was bored for oil. The brine has flowed constantly for 11 years. *W. W. Hall*, St. Mary's.

" 468. *Corn.* Yield 50 bushels per acre.
" 469. *White Gourd Seed Corn.* Yield 50 bushels per acre.
" 470. *Yellow* " " " " " " " " } *R. H. Browse, Grape Island.*
" 471. *Wheat.* " 25 " " "
" 472. *Flax.*

" 473 to No. 533. Collection of 60 varieties of woods of Pleasants County, by *R. H. Browse*, Grape Island.

Common Name.	Botanical Name.
No. 473. *White Oak*	Quercus Alba.
" 474. *Red* "	" Rubra.
" 475. *Black* "	" Tinctoria.
" 476. *Chestnut* "	" Prinus.
" 477. *Pin* "	" Palustris.
" 478. *Bur* "	" Macrocarpa.
" 479. *White Poplar*	Liriodendron Tulipifera.
" 480. *Yellow* "	" "
" 481. *Black Walnut*	Juglans Nigra.
" 482. *White* "	" Cinerea.
" 483. *Red Hickory*	Carya Porcina.
" 484. *White* "	" Tomentosa.
" 485. *White or Silver Maple*	Acer Dasycorpum.
" 486. *Sugar Maple*	Acer Saccharinum.
" 487. *Rock* "	" "
" 488. *Water* "	" Rubrum.
" 489. *Common Locust*	Robinia Pseudacacia.
" 490. *Honey* "	Gleditschia Triacanthos.
" 491. *Chestnut*	Castania Vesca.
" 492. *White Ash*	Fraxinus Americanus.
" 493. *Hoop* "	" Sambucifolia.
" 494. *Wild Cherry*	Prunus Serotina.
" 495. *Red Birch*	Betula Nigra.
" 496. *Elm*	Ulmus Americana.
" 497. *Slippery Elm*	" Fulva.
" 498. *Lynn*	Tilia Americana.
" 499. *Yellow Pine*	Pinus Mitis.
" 500. *Hemlock*	Abies Canadensis.
" 501. *Cedar*	Juniperus Virginiana.
" 502. *Sycamore*	Platanus Occidentalis.
" 503. *Fetid Buckeye*	Aesculus Glabra.
" 504. *Iron Wood*	Ostrya Virginica.
" 505. *Black or Sour Gum*	Nyssa Multiflora.
" 506. *Beech*	Fagus Ferruginea.
" 507. *Water Beech or Hornbeam*	Carpinus Americana.
" 508. *White Willow*	Salix Alba.
" 509. *Yellow* "	" Viminilis.
" 510. *Black* "	" Nigra.
" 511. *Box Elder*	Negundo Aceroides.
" 512. *Aspen*	Populus Tremuloides.
" 513. *Mulberry*	Morus Rubra.
" 514. *Persimmon*	Diospyra Virginiana.
" 515. *Cucumber*	Magnolia Acuminata.

Common Name.	Botanical Name.
No. 516. *Cottonwood*	Populus Heterophylla.
" 517. *Sassafras*	Sassafras Officinale.
" 518. *Red Bud*	Cercis Canadensis.
" 519. *Sumac*	Rhus Typhina.
" 520. *Papaw*	Asimina Triloba.
" 521. *Wild Plum*	Prunus Americana.
" 522. *Red Haw*	Crataegus Coccinea.
" 523. *Black* "	Viburnum Prunifolium.
" 524. *Service*	Amelanchier Canadensis.
" 525. *Dogwood*	Cornus Florida.
" 526. *Wild Grape*	Vitis.
" 527. *Spice Wood*	Lindera Benzoin.
" 528. *Witch Hazel*	Hamamelis Virginica.
" 529. *Alder*	Alnus Serrulata.
" 530. *Laurel*	Kalmia Latifolia.
" 531. *Elder*	Sambucus Canadensis.
" 532. *Coffee Tree*	Gymnocladus Canadensis.

PRESTON COUNTY.

" 533. *Bituminous Coal* from the *Austin Mine.* The seam is 8 to 9 feet, but is divided by partings, and it is only the lower 4 to 5 feet of solid coal that is worked at present, though if mined on an extensive scale the whole could be utilized. It makes a clear, even, silvery coke sufficient to bear the heaviest burden of the blast furnace.

Water	0.115
Volatile Combustible Matter	31.117
Fixed Carbon	66.289
Ash (buff)	2.479
	100.000

Sulphur in Coal..... 0.639 per cent.
" Coke..... 0.644 " "

" 534. *Coke* from the *Austin Mine* coal. Is now being used at the Belmont Blast Furnace, Wheeling, and gives general satisfaction.

Water	0.542
Carbon	87.550
Sulphur	0.653
Ash (light straw)	11.255
	100,000

" 535. *Carbonate of Iron* from the land of the *Kingwood Gas, Coal and Iron Company,* Tunnellton. The seam will average nearly 2 feet. It crops out in many places on the company's land, and has been traced for several miles.

" 536. and 537. *Outcrop Coal* from the upper and lower portion of a 4½ foot seam that lies about 40 feet above No. 198, on the land of the *Kingwood Gas, Coal and Iron Company.*

	Upper Coal.	Lower Coal.
Water	0.342	0.510
Volatile Combustible Matter	31.469	31.190
Fixed Carbon	65.662	66.134
Ash	2.527	2.166
	100.000	100.000
Sulphur in Coal	0.576	0.607
" Coke	0.577	0.533

Both make a hard, bright coke.

No. 538. *Fire Clay*, about 150 feet above Nos. 536 and 537, and from the same company's land. The outcrop varies from 20 to 36 inches. It is an excellent clay for refractory bricks.

Silica	68.164
Alumna	24.113
Peroxide of Iron	0.006
Lime	trace.
Magnesia	"
Potash and Soda	"
Hygroscopic Water	0.855
Combined	6.662
Organic Matter and Loss	0.200
	100.000

PUTNAM COUNTY.

" 539. *Bituminous Coal* from the Pittsburgh seam where worked by the *Raymond Coal Company*. Especially adapted to steam and domestic use. Seam is 5 to 11 feet thick, with a general average of about 6 feet 2 inches.

Carbon	60
Volatile Matter	33
Ash	6
	99

" 540. *Bituminous Coal* from the "Pittsburgh seam" on Guano Creek, on land of *Jas. L. M'Lean*. Thickness 6 feet 4 inches.

" 541. *Carbonate of Iron* from the same land as the last specimen. Seam reported to be 6 feet thick.

" 542. *Brown Hæmatite*, from a reported 30-inch seam on the 1,600 acres of *R. T. Harvey*, two miles from the Great Kanawha River.

" 543. *Barrel Staves*, in the rough. For the home market being used for Whisky, Oil, and Molasses Barrels. Contributed by *Dall & Callaway*, Hurricane Depot.

" 544. *Hogshead Staves*, in the rough. For exporting to the West Indies and the sugar countries of the Mediterranean being used in the manufacture of Sugar and Molasses Hogsheads. Contributed by *Dall & Callaway*.

" 546. *Pipe Staves*, in the rough. For exporting to France, where they are used in wine storage. *Dall & Callaway*.

" 547. *Extra Heavy Eagle Pipe Staves*, in the rough. For exporting to France to be used in the manufacture of wine presses. By *Dall & Callaway*.

" 548. *White Oak Hoop Poles.*
" 549. *Hickory* " "
" 550. *Birch* " " } Contributed by *Dall & Callaway*, Hurricane Depot.

RALEIGH COUNTY.

No. 551. *Bituminous Coal*, from J. R. Millegan's mine. Seam 6½ feet. *Gen. A. Beckley.*

" 552. *Bituminous Coal*, from a 6-foot seam on the land of *G. H. Prince.*

Water	0.327
Volatile Combustible Matter	19.188
Fixed Carbon	75.823
Ash	4.732
	100.000

Sulphur in Coal..... 0.854 per cent.
" " Coke..... 1.061 "

" 553. *Brown Hæmatite*, from the land of *Wm. McCreery*, 7 miles from the C. & O. R. R. Sample is from the outcrop of a 3-foot seam.

Peroxide of Iron	79.350
Silica	3.599
Alumina	1.593
Phosphoric Acid	1.880
Sulphuric "	0.895
Lime	0.821
Magnesia	0.034
Hygroscopic Water	1.734
Combined "	9.507
Organic Matter and loss	0.589
	100.000

Iron	55.545 per cent.
Phosphorus	0.819 "
Sulphur	0.358 "

No. 554. *Mill Stone Rock*, from Table Rock, where it is in great abundance, and can be gotten out in any size. It is six miles from Papaw, on C. & O. R. R. *Jas. Seatt.*

" 555. *Yellow Pine*, section.
" 556. *White Oak*, "
" 557. *Black Walnut*, "
" 558. *Maple*, "
} *Gen. A. Beckley*, Raleigh Court House.

" 559. *Poplar*, " *J. C. Williams*, Pittsburgh.

" 560. *Yellow Pine*, (section.)
" 561. *Water Oak*, (Quercus Aquatica.)
} *Wm. McCreery's* lands.

" 562. *Curley Maple*, board.
" 562½ *Chestnut*, "
" 562¼ *Black Walnut*, "
} *Wm. Prince*, Court House.

RITCHIE COUNTY.

No. 563. *Ritchie Mineral* (mines now worked out), *D. McGregor*, Cairo.

" 564. *Natural Lubricating Oil*, from a well of *D. McGregor*, one-half mile south of Volcano. Depth of well, 883 feet. Yield, 5 barrels of oil and 1,000 to 1,500 barrels of water per day.

" 565. *Yellow Corn*. Yield, 90 bushels per acre. From farm of T. M. Harris.

SUMMERS COUNTY.

No. 566. *Hydraulic Limestone*. New Richmond, on C. & O. R. R. The cement from this was used in masonry on the road. *M. Gwinn.*

TAYLOR COUNTY.

No. 567. *Bituminous Coal*, from the "Pittsburgh seam," on the land of *J. H. Barnes*, where it is 8 feet thick.

" 568. *Cannel Coal*, reported 4 to 5 feet thick on the land of *Sam. Carrothers*, Irontown. Below it is a 2-foot vein of bituminous coal.

" 569. *Carbonate of Iron*, from a steep hill on Lost Run, two miles from its mouth, and facing John Riley's house. There are three strata, each eight inches thick in eight feet of rotten slate and shale, under which, in a blue clay, are lumps of Carbonate of Iron of three to fifteen pounds weight. *A. Armstrong*, Pruntytown.

Carbonate of Iron	33.141
Peroxide " "	33.100
Binoxide of Manganese	0.256
Silica	7.533
Alumina	4.978
Carbonate of Lime	12.495
Carbonate of Magnesia	3.214
Phosphoric Acid	0.536
Sulphuric "	1.050
Water	3.547
Loss	0.150
	100.000

Iron	39.100 per cent.
Phosphorus	0.234 " "
Sulphur	0.420 " "

No. 570 *Carbonate of Iron*, formerly worked at the mouth of Lost Run, and from the character of the samples seems to be the same seam as No. 569. *A. Armstrong*, Pruntytown.

Carbonate of Iron	24.576
Peroxide " "	34.443
Binoxide of Manganese	trace.
Silica	16.260
Alumina	2.982
Carbonate of Lime	13.913
" " Magnesia	3.478
Phosphoric Acid	0.477
Sulphuric "	1.201
Water	2.080
Loss	0.593
	100.000

Iron	35.983 per cent.
Phosphorus	0.207 " "
Sulphur	0.480 " "

" 571. *Carbonate of Iron*, from Plummer's Run. Reported to be in workable quantities. *A. Armstrong*, Pruntytown.

" 572. *Carbonate of Iron*, from the *Lancaster Furnace and Mining Company*, at Irontown, on B. & O. R. R.

Carbonate of Iron	31.34
Peroxide of Iron	33.98
Carbonate of Lime	16.52
" " Magnesia	5.28
Phosphoric Acid	0.68
Sulphuric "	0.13
Silica	9.36
Alumina	1.31
Water and Loss	1.40
	100.00

Iron	38.910
Phosphorus	0.296
Sulphur	0.052

" 573. *Sandstone* (building), from a quarry at Fetterman, 300 yards from B. & O. R. R. *A. Armstrong*, Pruntytown.

" 574. *Sandstone* (building), from a quarry near the Court House. *Gabriel Lanham.*

" 575. *Limestone*, near the Court House. *Zadock Lanham.*

" 576. *Limestone*, near the Court House. *Gabriel Lanham.*

" 577. *Fire Clay*, reported 6 to 7 feet thick on the land of *Sam Corrothers*, Irontown.

" 578. *White Corn.*
" 579. *Wheat.* } *John S. Williams.*

" 58c. *Wheat. John Riley.*

" 581. *Beans. G. W. Sinclair.*

" 582. *Poplar*, 5 feet diameter.
" 583. *Oak*, 4 " "
" 584. *Sugar Maple*, 3 " "
" 585. *Locust*, 2 " "
" 586. *Hickory*, block.
" 587. *White Oak*, "
" 588. *Hickory*, "
" 589. *Poplar*, "
" 590. *Sugar Maple* "

} *A. Armstrong*, Pruntytown.

TYLER COUNTY.

No. 591. *Tobacco.* Grown by *T. J. Staley.*
" 592. *Tobacco.* Yield, 1,000 pounds per acre.
" 593. *Pignut Hickory.*
" 594. *Shellbark* "
" 595. *Chinquapin Oak.*
" 596. *Wild Crab Apple* (Pinus Coronaria).
" 597. *Black Haw.*
" 598. *Speckled Alder* (Alnus Serrulata).
" 599. *Hawthorn* (Crataegus Crus-galli).
" 600. *Witch Hazel.*

D. D. Johnson, Long Reach.

UPSHUR COUNTY.

No. 601. *Pupils' Work.* Public School, Buckhannon.

WAYNE COUNTY.

No. 602. *Cannel Coal,* from a 5½-foot seam, on land of *Aspinwall & Low,* on Laurel Fork of Hezekiah Creek of Twelve Pole River.

" 602½ *Bituminous Coal,* from the outcrop of a 5½ to 6-foot seam, on the land of *Walter Osborn,* at the mouth of Camp Creek of the Left Hank Fork of Twelve Pole River.

Fixed Carbon	48.72
Volatile Combustible Matter	40.43
Ash	8.55
Water	2.30
	100.00

Sulphur in Coal.....0.76
" " Coke..... 0.85

" 603. *Bituminous Coal,* from a 7½-foot seam, on Twelve Pole River, on the land of *Wayne Ferguson.*

" 604. *Cannel Coal,* from Moses Fork of Twelve Pole River, 4 miles from the Lug Fork of Big Sandy River. Seam is 4′ 4″. On the land of *Wayne Ferguson,* Cassville.

" 605. *Coal,* from the "Peach Orchard" Seam, 6 feet thick. The specimen came from the Kentucky side of Big Sandy River, but the same seam is found in Wayne County.

Water	5.00
Volatile Combustible Matter	33.60
Fixed Carbon	58.55
Ash (white)	2.85
	100.00

" 606. *Coal,* from the "Chestnut Seam," 8 feet thick, from the same land as No. 605, and 200 feet above it.

" 607. *Black Band Iron Ore,* from a seam 30 inches thick, on the same land as No. 605.

Protoxide of Iron	34.07
Peroxide " "	2.31
Lime	7.31
Magnesia	6.30
Carbonic Acid	37.40
Phosphoric "	0.17
Sulphur	0.34
Organic Matter	6.45
Insoluble "	3.34
Water	2.30
	99.99

From the land of the *Great Western Mining and Manufacturing Company,* Peach Orchard, Kentucky. *Geo. S. Richardson,* (agent).

" 608. *Roasted Ore,* from the above.

WETZEL COUNTY.

No. 609. *Poplar*, 4 feet 4 inches in diameter. It measured 6 feet 1 inch across the stump. The section was cut 23 feet from the ground.
" 610. *White Oak*, 3½ feet diameter.
" 611. *Hickory*, 3½ " " This tree was 87 feet to the first limb, where it was 2 feet 1 inch in diameter.
(609–611: From the land of *W. F. Peterson*, 8 miles from Littleton Depot, B. & O. R. R.)
" 612. *Black Walnut*, 3 feet 9 inches in diameter. From land of *Henry Kyle*, Fishing Creek.

WIRT COUNTY.

No. 613. *Potters' Clay*, from a 10-foot deposit. *N. A. Pickering*, Newark.
" 614. *Heavy Oil*, from the Hale Well. *Messrs. Hale & Porter.*
" 615. *Petroleum*, from Oil Rock. *C. Dulin* (agent).
" 616. *Yellow Oil*, from the Parmenter Well. Has never been sent on the market, but is used medicinally by the citizens. *E. W. Hall*, Elizabeth.
" 617. *Corn. Lewis Sheppard.*
" 618. *Photograph.* High School, Elizabeth.
" 619. " Graded " Burning Springs.

WOOD COUNTY.

No. 620. *Bituminous Coal.* Seam 4½ feet thick. From *Volcano Oil and Coal Company.*
" 621. *Iron Ore*, said to contain 45 per cent. of Iron. The bed is 8 feet thick of clay, with 13 layers of ore.
" 622. *Potters' Clay.* Stratum, 6 feet thick.
(621–622: From land of *H. & L. Muenchmeyer, Lubeck.*)
" 623. *Ten Crocks, Jugs, &c.*
" 624. *Potters' Clay.* Deposit is 10 feet thick, of which about 6 feet is used in the Manufacture of No. 623.
(623–624: Made by *A. P. Donaghho*, Parkersburg.)
" 624½. *Mineral Water*, from the Parkersburg Mineral Wells. Contributed by *Joe E. Simpson.* This water has proven itself to be of great efficacy in dyspepsia, dropsy, afflictions of the liver, and diseases generally of the alimentary canal and abdominal viscera. One quart contains:

Carbonic Acid	16 cubic inches.
Sulphate of Magnesia	10 grains.
" " Soda	24 "
" " Iron	4 "
Chloride of Lime	41 "
Carbonate of Soda	4 "
Iodine	trace.

" 625 to 635. *Ten Specimens of Lubricating and Refining Oils*, from Volcano. Contributed by *E. W. Sharp and Dr. W. H. Staples.*
" 625. *Natural Lubricating Oil* of 27° gravity Baume at 60° temperature. Used on locomotives, rolling mills, &c., or anywhere that great heat and exposure to the elements are to be provided against.
" 626. *Natural Lubricating Oil* of 28° gravity Baume at 60° temperature. Used on large stationary engines, steamships, steam sawmills, &c., &c.
" 627. *Natural Lubricating Oil* of 29° gravity Baume at 60 temperature. Used in planing mills and other machinery of high speed and heavy bearings.
" 628. *Natural Lubricating Oil* of 30° gravity Baume at 60° temperature. Used on car journals, steamboats, and heavy factory machinery.
" 629. *Natural Lubricating Oil* of 31° gravity Baume at 60° temperature. Used on small engines, mowing, &c., machines and wood-working machinery.

No. 630. *Natural Lubricating Oil* of 32° gravity Baume at 60° temperature. Used in factory and other machinery of high speed and light bearings.
" 631. *Natural Oil* of 33° gravity Baume at 60° temperature. Used for mixing with oils of light gravity for refining.
" 632. *Natural Oil* of 34° gravity Baume at 60° temperature. Used for mixing with oil of light gravity for refining.
" 633. *Natural Oil* of 35° gravity Baume at 60° temperature. Used for mixing with oil of light gravity for refining.
" 634. *Natural Oil* of 40° gravity Baume at 60° temperature. Used for manufacturing illuminating oil.

" 635. *Crude Petroleum* 29° gravity
" 636. " " 30° "
" 637. " " 31° "
" 638. " " 32° "
" 639. " " 35° "
" 640. " " 40° "

} *Camden Consolidated Oil Company*, Parkersburg.

" 641. *Refined Petroleum*, 29° gravity, 400° fire test
" 642. " " 30° " 400° "
" 643. " " Standard 110° "
" 644. " " 130° "
" 645. " " 150° "
" 646. " " Water White 110° "
" 647. " " Headlight Oil, 175° "

} *Camden Consolidated Oil Company*, Parkersburg.

" 648. *Virginia Seedling.* Vintage 1874. Fermented on the skins.
" 649. *Virginia Seedling and Concord.* Vintage 1874. The Seedling fermented on the skins.
" 650. *Sweet Virginia Seedling.* Vintage 1874. Not fermented on the skins and made by boiling down the juice.
" 651. *Union Wine A.* Vintage 1874. A mixture of Virginia Seedling, Concord and North Muscatine.
" 652. *Union Wine B.* Vintage 1873. A mixture of Virginia Seedling, Clinton and Ives. All these wines are of the pure juice of the grape.

} Contributed by *H. & L. Muenchmeyer*, Subreck P. O., by whom the wines were grown and made.

" 653. *Concord Wine.*
" 654. *Muscatine Wine.*
" 655. *Virginia Seedling Wine.*

} *Jno. S. Eschbacher & Son*, Walker's Station.

UNKNOWN COUNTIES.

No. 656. *Locust.*
" 657. *Sumac.*
" 658. *Beech.*
" 659. *Hemlock.*
" 660. *Locust.*
" 661. *Hickory.*
" 662. *Lynn.*
" 663. *Dogwood.*
" 664. *Papaw.*
" 665. *Ash.*
" 666. *Black Oak.*
" 667. *Text Books*, used in Free Schools of West Virginia.
" 668. *White Walnut.*
" 669. *Hickory.*
" 670. *Sour Gum.*

STATE OF VIRGINIA.

No. 671. *Brown Hæmatite*, reported to be in "enormous quantities," on 100 acres of *J. J. Stack*, 5 miles from Callahan's Depot, C. & O. R. R., Alleghany County.

No. 672. *Mineral Water*, from the Sweet Chalybeate Spring, Alleghany County. This is one of the noted medicinal waters of Virginia. 100 cubic inches contains:

Sulphate of Lime	14.233 grains.
" " Magnesia	3.107 "
" " Soda	1.400 "
Carbonate of Lime	1.166 "
Chloride of Soda	0.037 "
" " Magnesia	0.680 "
" " Lime	0.010 "
Peroxide of Iron	0.320 "
Organic Matter	small quantity.
Iodine	mere trace.

Volume of each of the gases contained in a free state in 100 cubic inches of water.

Carbonic Acid	46.10 cubic inches.
Nitrogen	2.57 "
Oxygen	0.20 "
Sulphuretted Hydrogen	a trace.

" 673. *"Green Oxide of Copper."*
" 674. *White Iron Pyrites.*
" 675. *Copper Pyrites.*
" 676. *Granular Iron Pyrites.*

Louisa Copper Mine, Louisa County.

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Governor State of West Virginia.

HON. A. R. BOTELER,

United States Commissioner, and Member of the Executive Committee.

HON. A. J. SWEENEY,

United States Commissioner, and President State Commission.

HON. THOMAS MASLIN,
DR. J. P. HALE,
C. H. BEALL,
G. W. FRANZHEIM,
O. C. DEWEY,
Secretary of State Board.

} State Commissioners.

ADDRESS,

WEST VIRGINIA HEADQUARTERS,

International Exhibition, 1876.

PHILADELPHIA.